



## Ozone and PM related health co-benefits of climate change policies in Mexico

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### Abstract:

This paper reports the results of extending a previous analysis of reductions in ozone exposures resulting from greenhouse gas reduction policies in Mexico, to the case of estimating reductions in premature death and risks of non-fatal diseases following reductions in both ozone and particulate matter exposures. The results show that a policy of greenhouse gas reduction in the Mexican economy by 77% relative to a baseline growth scenario results in reduced mortality loss of almost 3000 lives per year. The benefit in terms of non-fatal disease is 417,000 cases reduced per year, at a savings of \$0.6B per year in cost of illness. These reductions in human health risk, stemming from co-benefits of climate change policies, are significant in light of targets of risk reduction typically used in environmental regulatory decisions, and would be considered important drivers of policy choice if climate policy were harmonised with other areas of risk-based environmental policy.

**Source:** <http://dx.doi.org/10.1016/j.envsci.2011.12.006>

### Resource Description

#### Climate Scenario : ☒

specification of climate scenario (set of assumptions about future states related to climate)

Other Climate Scenario

**Other Climate Scenario:** E3MG

#### Early Warning System: ☒

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

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#### Exposure : ☒

weather or climate related pathway by which climate change affects health

Air Pollution

**Air Pollution:** Ozone, Particulate Matter

#### Geographic Feature: ☒

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resource focuses on specific type of geography

None or Unspecified

## **Geographic Location:**

resource focuses on specific location

Non-United States

**Non-United States:** Non-U.S. North America

## **Health Co-Benefit/Co-Harm (Adaption/Mitigation):**

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

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## **Health Impact:**

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Morbidity/Mortality, Respiratory Effect

## **Intervention:**

strategy to prepare for or reduce the impact of climate change on health

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## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

## **Model/Methodology:**

type of model used or methodology development is a focus of resource

Cost/Economic, Outcome Change Prediction

## **Resource Type:**

format or standard characteristic of resource

Research Article

**Socioeconomic Scenario:** Other Socioeconomic Scenario

**Other Socioeconomic Scenario:** E3MG

## **Timescale:**

time period studied

Medium-Term (10-50 years)

## **Vulnerability/Impact Assessment:**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

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